



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:)	Group Art Unit: 2827
)	
Michael John Watson)	
)	
Serial Number 09/954,528)	
)	Examiner: Chambliss
Filed: September 17, 2001)	
)	
Title: IMPROVED ADHESIVES FOR)	
SEMICONDUCTOR APPLICA-)	
TIONS EFFICIENT PROCESSES)	
FOR PRODUCING SUCH)	AMENDMENTS TO
DEVICES AND THE DEVICE)	THE CLAIMS
PER SE PRODUCED BY THE)	
EFFICIENT PROCESSES)	
)	
Attorney Docket: DC – 4952)	April 28, 2003

Assistant Commissioner
For Patents
Washington DC 20231

Dear Sir:

Please find enclosed 1 page showing the amendments to the claims.

Please delete claim 4.

Please add claim 15.

Respectfully submitted,

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AMENDED CLAIMS

Claim 15 A semiconductor device in which at least two individual substrates are joined and bonded by a curable adhesive composition, said curable adhesive composition comprising in combination a curable polymeric base material and contained in said polymeric base material,

(I) inorganic insulator particles having an average particle size of 1 μm to 1000 μm and a major axis to minor axis ratio of about 1.0 to 1.5, said inorganic insulator particles being present in the composition in an amount sufficient to provide a planar adhesive bond thickness between substrates being joined by said adhesive, and

(II) at least one low coefficient of thermal expansion filler having an average particle size of less than 10 μm in an amount of at least greater than 50 weight percent based on the weight of the curable polymeric base material, wherein the low coefficient of thermal expansion fillers having sizes of greater than 10 to about 100 μm are present in less than 0.1 weight percent based on the total weight of the low coefficient of thermal expansion fillers present in the adhesive composition.

Claim 7 (once amended)

The semiconductor device as claimed in claim 15 wherein the two individual substrates are a semiconductor die and an attachment substrate for the semiconductor die.

Claim 11 (once amended)

An adhesive composition as claimed in claim 1 wherein the adhesive base material is a curable silicone composition.

Claim 13 (once amended)

An adhesive composition as claimed in claim 1 wherein the adhesive base material is an epoxy composition.